A4175-1-U

annual data 1985

COPPER · BRASS · BRONZE

copper supply & consumption

1964-1984

COPPER DEVELOPMENT ASSOCIATION INC.

Preface

Statistical data on the supply and consumption of copper and copper alloys in the United States are available from many governmental and private sources. In this report original data from these sources are brought together and rationalized by CDA and American Bureau of Metal Statistics Inc. (ABMS) to provide a set of data on U.S. copper supply and consumption that is both consistent and accurate in all aspects from mine to end-use market.

The main sources of information assembled here are the Bureau of Mines in the U.S. Department of the Interior, the Bureau of the Census in the U.S. Department of Commerce, and Copper Development Association Inc. Where data from different sources are conflicting, and where original data appear to be in error, the best judgment has been applied. General sources are shown in the tables throughout the report. Those interested to know the specific sources of any of the data should contact CDA.

The statistics are arranged in a logical sequence to trace the flow of copper in the U.S. economy from mining and scrap collection through smelting, refining and ingot making to the wire rod and wire mills, brass mills, and foundries and then on to the final end-use markets. This flow is shown schematically on pages 4–5. On this schematic flowsheet the major statistics of copper supply and consumption in the United States for 1984 appear. Along with each major statistic on the chart, a reference is shown. This reference identifies the table in the report where details on that item, from 1964 through 1984, will be found. Most data for 1984 are preliminary.

There are four major tables in the report. *Table 1* covers the supply of primary copper. *Table 2* presents data on the supply of copper from secondary sources. In *Table 3*, statistics on the consumption of primary and secondary metals by mills, foundries and other industries are summarized. These three tables are provided by ABMS. Finally, *Table 4* details the supply of mill, foundry and powder products and their consumption in the five end-use market areas. In each of these tables, additions to the flow (such as net imports) are indicated as positive numbers, while subtractions from the flow (such as melting losses or net additions to stocks) are shown as negative numbers.

The arrangement of the data in the report can be illustrated with an example. Consider *Mine Production*, the upper left-hand box in the flowsheet on page 4. As shown in the box, mine production of copper in the United States totaled 1,198.2 thousand short tons in 1984. Beneath this figure a number appears referring to *Table 1, Item 1,* abbreviated *1(1)*. This means that in *Table 1*, on Line (1), mine production is shown for the full period 1964 through 1984. In *Table 1*, on Line (1), a further reference will be found after the item heading *Mine Production*, directing the reader to page 7. This reference means that further details on mine production appear on page 7. In fact, on page 7, a table entitled *Table 1, Item 1* presents the data on mine production by state for 1964 through 1984. In this way all the data on supply and consumption appear in logical sequence proceeding through the report, eliminating the need for explanatory text.

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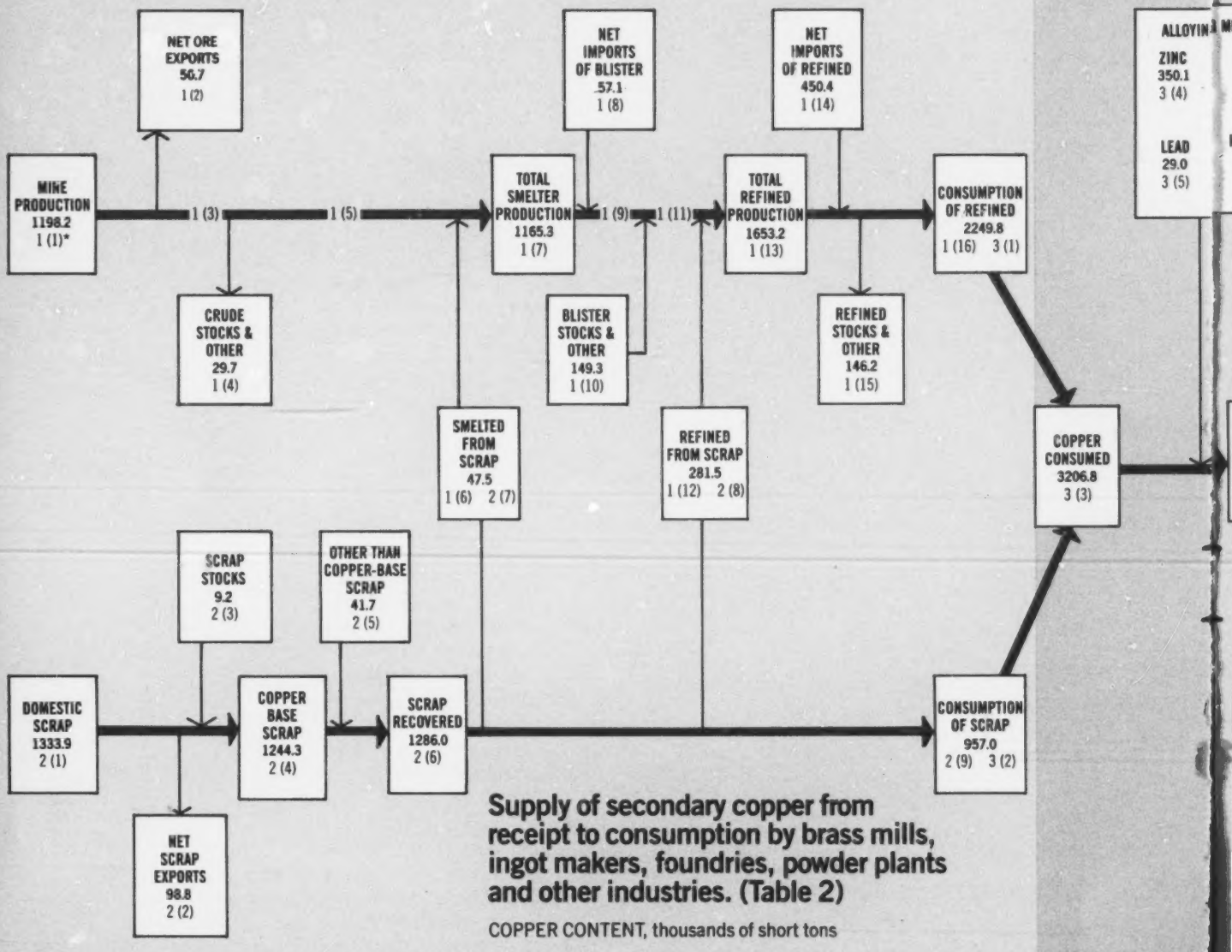
Copper supply and consumption in the United States 1984

Supply of primary copper from mine to consumption by wire rod mills, brass mills, ingot makers, foundries, powder plants and other industries. (Table 1)

COPPER CONTENT, thousands of short tons


NET ORE EXPORTS 56.7 1 (2)
NET IMPORTS OF BLISTER 57.1 1 (8)
NET IMPORTS OF REFINED 450.4 1 (14)
ALLOYIN
ZINC 350.1 3 (4)
LEAD 29.0 3 (5)
MINE PRODUCTION 1198.2 1 (1)*
1 (3)
1 (5)
TOTAL SMELTER PRODUCTION 1165.3 1 (7)
1 (9)
1 (11)
TOTAL REFINED PRODUCTION 1653.2 1 (13)
CONSUMPTION OF REFINED 2249.8 1 (16) 3 (1)
CRUDE STOCKS & OTHER 29.7 1 (4)
BLISTER STOCKS & OTHER 149.3 1 (10)
REFINED STOCKS & OTHER 146.2 1 (15)
SMELTED FROM SCRAP 47.5 1 (6) 2 (7)
REFINED FROM SCRAP 281.5 1 (12) 2 (8)
COPPER CONSUMED 3206.8 3 (3)
SCRAP STOCKS 9.2 2 (3)
OTHER THAN COPPER-BASE SCRAP 41.7 2 (5)
DOMESTIC SCRAP 1333.9 2 (1)
COPPER BASE SCRAP 1244.3 2 (4)
SCRAP RECOVERED 1286.0 2 (6)
CONSUMPTION OF SCRAP 957.0 2 (9) 3 (2)
NET SCRAP EXPORTS 98.8 2 (2)

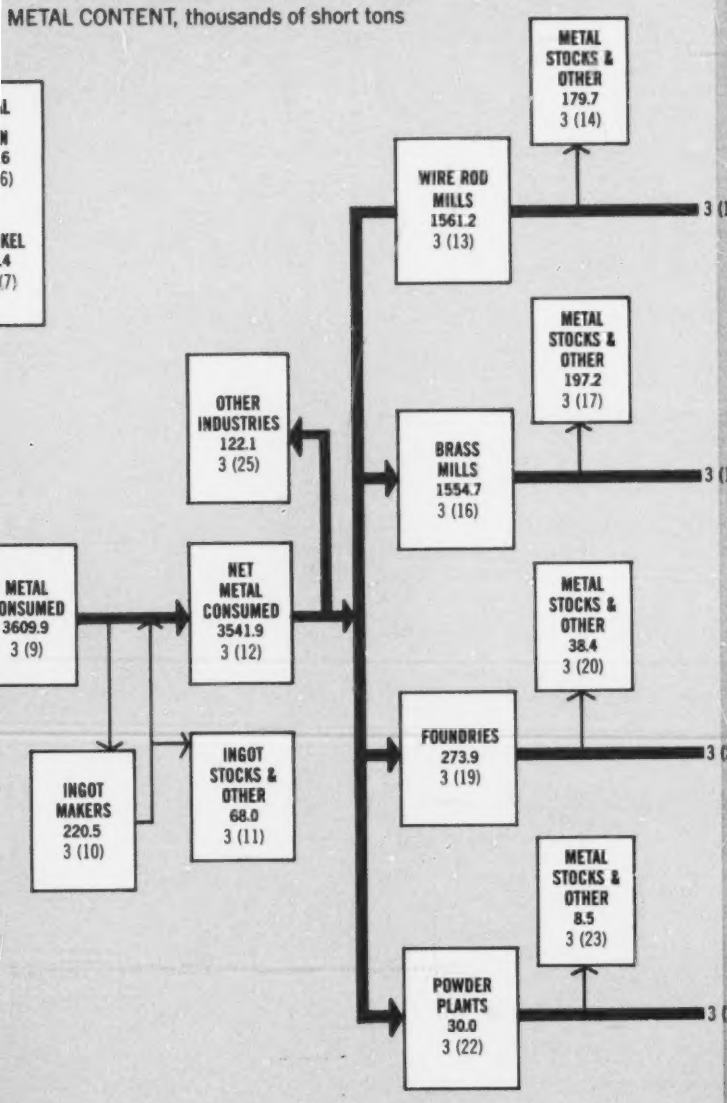
Supply of secondary copper from receipt to consumption by brass mills, ingot makers, foundries, powder plants and other industries. (Table 2)

COPPER CONTENT, thousands of short tons

*1 (1) Refers to table and item in report where data for 1964 through 1984 appear.

Consumption of metals by wire rod mills, brass mills, ingot makers, foundries, powder plants and other industries. (Table 3)

METAL CONTENT, thousands of short tons


METAL STOCKS & OTHER 179.7 3 (14)
WIRE ROD MILLS 1561.2 3 (13)
3 (15)
METAL STOCKS & OTHER 197.2 3 (17)
OTHER INDUSTRIES 122.1 3 (25)
BRASS MILLS 1554.7 3 (16)
3 (18)
METAL CONSUMED 3609.9 3 (9)
NET METAL CONSUMED 3541.9 3 (12)
METAL STOCKS & OTHER 38.4 3 (20)
INGOT MAKERS 220.5 3 (10)
INGOT STOCKS & OTHER 68.0 3 (11)
FOUNDRIES 273.9 3 (19)
3 (21)
METAL STOCKS & OTHER 8.5 3 (23)
POWDER PLANTS 30.0 3 (22)
3 (24)

Supply of wire mill, brass mill, foundry and powder products and their consumption in the end-use markets. (Table 4)

METAL CONTENT, millions of pounds

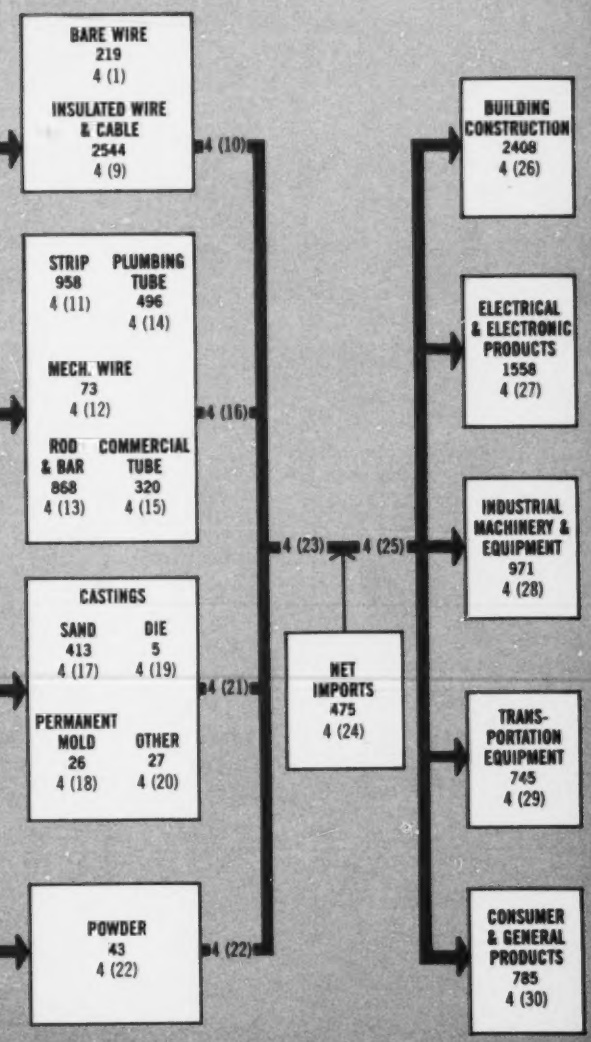

BARE WIRE 219 4 (1)
INSULATED WIRE & CABLE 2544 4 (9)
4 (10)
STRIP 958 4 (11)
PLUMBING TUBE 496 4 (14)
MECH. WIRE 73 4 (12)
ROD & BAR 868 4 (13)
COMMERCIAL TUBE 320 4 (15)
4 (16)
CASTINGS
SAND 413 4 (17)
DIE 5 4 (19)
PERMANENT MOLD 26 4 (18)
OTHER 27 4 (20)
4 (21)
POWDER 43 4 (22)
4 (22)
4 (23)
4 (25)
NET IMPORTS 475 4 (24)
BUILDING CONSTRUCTION 2408 4 (26)
ELECTRICAL & ELECTRONIC PRODUCTS 1558 4 (27)
INDUSTRIAL MACHINERY & EQUIPMENT 971 4 (28)
TRANS-PORTATION EQUIPMENT 745 4 (29)
CONSUMER & GENERAL PRODUCTS 785 4 (30)

Table 1

Supply of primary copper from mine to consumption by wire rod mills, brass mills, ingot makers, foundries, powder plants and other industries

	COPPER CONTENT, thousands of short tons																				
	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984[p]
(1) Mine Production (page 7)	1,246.8	1,351.7	1,429.2	954.1	1,204.6	1,544.6	1,719.7	1,522.2	1,664.8	1,717.9	1,597.0	1,413.4	1,606.6	1,504.0	1,496.5	1,594.6r	1,301.9	1,695.5	1,264.3r	1,144.3r	1,198.2
(2) Net Ore Imports (page 8)	51.5	26.3	40.5	−5.7	−37.4	37.9	−27.7	23.1	35.4	19.4	36.7	65.7	74.8	42.2	13.9	−23.9	−101.2	−130.2	−107.1	55.7	−50.7
(3) Total Crude Primary	1,298.3	1,378.0	1,469.7	948.4	1,167.2	1,582.5	1,692.0	1,545.3	1,700.2	1,737.3	1,633.7	1,479.1	1,680.4	1,546.2	1,510.4	1,570.7r	1,200.7	1,565.3	1,157.2r	1,200.0r	1,147.5
(4) Crude Stocks and Other	−1.2	−11.1	−80.0	−86.1	99.3	3.0	−50.7	−45.3	−9.8	6.7	−63.8	−32.0	−145.7	−111.0	−90.2	−98.4r	−89.2	−113.8	−81.7r	−177.3r	−29.7
(5) Smelter Production From Primary	1,297.1	1,366.9	1,389.7	862.3	1,266.5	1,585.5	1,641.3	1,500.0	1,690.4	1,744.0	1,569.9	1,447.1	1,534.7	1,435.2	1,420.2	1,472.3	1,111.5	1,451.5	1,075.5	1,022.7	1,117.8
(6) Smelter Production From Scrap	88.4	93.9	114.6	70.7	84.8	77.3	78.9	66.3	69.0	77.8	79.5	49.4	51.0	49.4	59.8	66.4	49.5	67.1	49.7	65.3	47.5
(7) Total Smelter Production (page 8)	1,385.5	1,460.8	1,504.3	933.0	1,351.3	1,662.8	1,720.2	1,566.3	1,759.4	1,821.8	1,649.4	1,496.5	1,585.7	1,484.6	1,480.0	1,538.7	1,161.0	1,518.6	1,125.2	1,088.0	1,165.3
(8) Net Imports of Blister (page 8)	384.8	327.7	349.2	248.3	255.0	233.6	216.6	128.0	148.9	146.6	205.1	87.4	41.1	28.3	70.0	66.9	47.6	71.1	111.8	79.4	57.1
(9) Total Blister	1,770.3	1,788.5	1,853.5	1,181.3	1,606.3	1,896.4	1,936.8	1,694.3	1,908.3	1,968.4	1,854.5	1,583.9	1,626.8	1,512.9	1,550.0	1,605.6	1,208.6	1,589.7	1,237.0	1,167.4	1,222.4
(10) Blister Stocks and Other (page 9)	−25.6	17.2	−27.9	22.4	−84.1	−76.3	−92.8	−36.2	33.9	−22.1	−120.3	−91.1	−36.5	32.7	107.1	131.2	175.6	179.4	165.3	200.9r	149.3
(11) Refined Production from Blister	1,744.7	1,805.7	1,825.6	1,203.7	1,522.2	1,820.1	1,844.0	1,658.1	1,942.2	1,946.3	1,734.2	1,492.8	1,590.3	1,545.6	1,657.1	1,736.8	1,384.2	1,769.1	1,402.3	1,368.3r	1,371.7
(12) Refined Production from Scrap	245.7	335.1	357.7	322.9	316.8	394.8	398.7	304.3	316.3	366.3	404.4	282.1	300.2	303.0	362.3	441.2	474.3	419.4	452.7	374.9r	281.5
(13) Total Refined Production (page 9)	1,990.4	2,140.8	2,183.3	1,526.6	1,839.0	2,214.9	2,242.7	1,962.4	2,258.5	2,312.6	2,138.6	1,774.9	1,890.5	1,848.6	2,019.4	2,178.0	1,858.5	2,188.5	1,855.0	1,743.2r	1,653.2
(14) Net Imports of Refined (page 9)	−179.0	−193.5	−117.0	168.7	149.3	−83.8	−89.9	−23.7	9.7	8.8	177.2	−26.4	266.1	327.8	342.7	147.1	481.1	325.2	274.2	435.2	450.4
(15) Refined Stocks and Other (page 10)	51.2	85.7	310.0	288.3	−109.9	19.1	−102.3	82.3	−30.6	126.9	−112.3	−206.2	−159.1	16.8	59.6	60.9	−280.8	−276.6	−294.8	−221.3r	146.2
(16) Consumption of Refined (page 10)	1,862.6	2,033.0	2,376.3	1,983.6	1,878.4	2,150.2	2,050.5	2,021.0	2,237.6	2,448.3	2,203.5	1,542.3	1,997.5	2,193.2	2,421.7	2,386.0	2,058.8	2,237.1	1,834.4	1,957.1r	2,249.8

Sources: U.S. Department of the Interior, Bureau of Mines;
U.S. Department of Commerce, Bureau of the Census.

p - preliminary r - revised

Table 1, Item 1.

Mine production of recoverable copper in the United States

COPPER CONTENT, thousands of short tons

	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984[p]
Arizona	691.0	703.4	739.6	501.7	628.0	801.4	917.9	820.2	908.6	927.3	858.8	813.2	1,024.4	923.8	982.6	1,046.1r	848.9	1,147.3	848.3r	747.6r	824.5
Michigan	69.0	71.7	73.4	58.5	74.8	75.2	67.5	56.0	67.3	72.2	67.0	73.7	43.7	42.4	38.4	(b)	(b)	(b)	(b)	(b)	(b)
Missouri	2.1	2.3	3.9	3.2	5.5	12.7	12.1	8.4	11.5	10.3	12.7	14.3	11.1	11.7	11.9	14.4	15.0	9.3	8.8	8.5r	(b)
Montana	103.8	115.5	128.1	65.5	69.5	103.3	120.4	88.6	123.1	132.5	131.1	88.0	91.1	86.2	74.2	77.0	41.6	68.9	71.6r	36.8r	19.5
Nevada	67.3	71.3	78.7	50.8	77.2	104.9	106.7	96.9	101.1	93.7	84.1	81.2	58.2	67.1	22.5	(b)	(b)	(b)	(b)	(b)	(b)
New Mexico	86.1	98.7	108.6	75.0	90.8	120.0	166.3	157.4	168.0	204.7	196.6	146.3	172.4	164.7	140.9	181.1	164.7	169.9	(b)	(b)	(b)
Tennessee	13.9	14.8	15.4	14.6	14.2	15.4	15.5	13.9	11.3	8.5	6.3	10.0	11.1	6.2	12.4	(b)	(b)	(b)	(b)	(b)	(b)
Utah	199.6	259.1	265.4	168.6	228.2	296.7	295.7	263.5	259.5	256.6	230.6	177.2	185.5	194.1	205.4	212.8	173.9	232.9	208.4	187.1	(b)
Other States[a]	14.0	14.9	16.1	16.2	16.4	15.0	17.6	17.3	14.4	12.1	9.8	9.5	8.1	7.8	8.2	63.2r	57.8	67.2	127.2r	164.3r	354.2
TOTAL	1,246.8	1,351.7	1,429.2	954.1	1,204.6	1,544.6	1,719.7	1,522.2	1,664.8	1,717.9	1,597.3	1,413.4	1,605.6	1,504.0	1,496.5	1,594.6r	1,301.9	1,695.5	1,264.3r	1,144.3r	1,198.2

Sources: U.S. Department of the Interior, Bureau of Mines; ABMS.
p - preliminary r - revised
(a) - Includes California, Colorado, Idaho, Maine, Oregon, Pennsylvania & Washington.
(b) - Included In Other States.

Mine production of recoverable copper in the World

COPPER CONTENT, thousands of short tons

	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984[p]
Australia	117.2	101.2	122.7	101.2	120.8	144.2	173.9	195.4	204.8	242.8	277.0	241.4	240.9	244.3	244.8	261.9	268.4	255.0	270.4r	288.2r	260.5
Canada	486.9	507.8	506.1	613.3	633.3	573.2	672.7	721.5	793.3	908.2	905.4	808.9	805.7	837.1	726.9	701.5	789.7	762.0r	675.2r	719.9r	785.3
Chile	685.3	645.2	701.8	727.7	724.1	758.5	762.4	780.8	790.1	810.6	994.4	913.0	1,108.0	1,162.1	1,140.0	1,171.4	1,177.2	1,191.7	1,369.3r	1,385.7r	1,422.0
China	80.5	84.9	93.7	99.2	99.2	93.7	110.2	121.3	126.8	132.3	143.3	154.3	165.3	170.9	176.4	176.4	181.9	187.4	192.9	192.9r	220.0
Japan	117.1	118.1	123.1	129.9	132.2	133.5	131.7	133.4	123.6	100.6	90.5	93.7	89.9	89.7	79.4	65.1	58.0	56.7r	56.3r	50.7r	47.7
Mexico	57.4	60.8	62.3	61.7	67.4	73.0	67.2	69.7	86.8	88.7	91.2	86.2	98.1	98.9	96.1	118.1	193.3	254.1	263.6	227.2r	210.3
Papua New Guinea	–	–	–	–	–	–	–	–	136.7	201.6	202.9	190.1	194.6	201.0	218.9	188.3	161.8	182.3	187.4	201.9	181.3
Peru	194.4	198.7	220.5	212.4	234.2	219.1	242.7	228.5	241.5	223.4	233.2	182.8	244.2	363.1	414.9	437.8	404.2	361.1	392.8	355.2r	406.8
Philippines	66.7	69.1	81.4	95.0	121.6	144.8	176.7	217.8	235.6	243.8	248.6	248.9	261.9	300.7	290.3	328.8	335.7	336.5r	322.0	301.1r	257.2
Poland	14.8	16.6	17.7	19.1	28.3	53.2	91.4	134.7	148.8	167.6	203.9	253.5	289.9	310.9	343.9	374.8	378.1	324.7	414.5	443.5r	445.0
Scandinavia	69.8	66.6	62.3	64.8	71.7	87.5	84.9	88.6	100.1	124.5	110.7	118.6	129.8	133.0	135.9	127.4	119.7	129.1	134.0	141.0r	129.1
South Africa	67.6	66.7	137.5	140.5	138.5	140.1	164.5	173.6	178.5	193.8	197.4	197.2	217.0	238.2	230.7	224.0	233.6	232.1	228.3	233.5r	236.8
United States	1,246.8	1,351.7	1,429.2	954.1	1,204.6	1,544.6	1,719.7	1,522.2	1,664.8	1,717.9	1,597.0	1,413.4	1,605.6	1,504.0	1,496.5	1,594.6r	1,301.9	1,695.5	1,264.3r	1,144.3r	1,198.2
USSR	716.5	716.5	771.6	881.8	909.4	964.5	1,019.6	1,091.3	1,135.4	1,168.4	1,168.4	1,212.5	1,245.6	1,212.5	1,256.6	1,245.6	1,245.6	1,256.6	1,267.7r	1,300.7r	1,320.0
Yugoslavia	69.7	69.0	64.5	69.7	77.7	90.1	100.1	104.1	113.6	123.2	123.6	126.7	132.4	128.1	135.9	122.8	128.7	122.4	131.5	142.7r	149.9
Zaire	304.9	318.1	349.3	353.3	359.4	401.4	426.7	448.8	480.3	538.5	550.8	545.4	490.1	530.9	467.2	440.7	506.7	556.4	554.2	553.6r	537.9
Zambia	697.0	766.9	687.2	730.8	755.0	793.1	754.1	718.0	790.5	778.9	769.4	746.2	781.4	723.1	708.8	648.5	656.8	647.5	624.9r	598.3r	622.6
Other	306.9	322.5	328.6	331.3	347.4	336.2	359.2	389.7	434.3	517.5	546.9	534.4	523.7r	517.3r	480.0r	512.1r	523.7r	606.8r	735.8r	818.9r	954.8
TOTAL WORLD	5,299.5	5,480.4	5,759.5	5,585.6	6,024.8	6,550.7	7,057.7	7,139.4	7,785.5	8,282.3	8,454.6	8,067.2	8,624.1r	8,765.8r	8,643.2r	8,739.8r	8,665.0r	9,157.9r	9,085.1r	9,099.3r	9,385.4

Sources: United States – U.S. Department of the Interior, Bureau of Mines.
Other Countries – ABMS; Metallgesellschaft; CDA.
p - preliminary r - revised

Table 1, Item 2.

Imports and exports of copper ore in the United States

COPPER CONTENT, thousands of short tons

	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984[p]
Imports (Ore, Concentrate, Matte)	52.1	37.0	41.9	33.0	27.6	39.1	33.8	31.3	55.0	42.9	56.0	74.0	89.6	58.0	33.2	25.2	16.5	36.0	108.1	102.8	16.5
Exports (Ore, Concentrate, Matte)	−0.6	−10.7	−1.4	−38.7	−65.0	−1.2	−61.5	−8.2	−19.6	−23.5	−19.3	−8.3	−14.8	−15.8	−19.3	−49.1	−117.7	−166.2	−215.2	−47.1	−67.2
Net Imports (Ore, Concentrate, Matte)	**51.5**	**26.3**	**40.5**	**−5.7**	**−37.4**	**37.9**	**−27.7**	**23.1**	**35.4**	**19.4**	**36.7**	**65.7**	**74.8**	**42.2**	**13.9**	**−23.9**	**−101.2**	**−130.2**	**−107.1**	**55.7**	**−50.7**

Source: U.S. Department of Commerce, Bureau of the Census.
p - preliminary

Table 1, Item 7.

Smelter production of copper in the United States

COPPER CONTENT, thousands of short tons

	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984[p]
Smelter Production — Domestic Ore[(a)] (Table 1, Item 5)	1,259.8	1,335.7	1,353.1	841.3	1,234.7	1,547.5	1,605.2	1,470.8	1,649.1	1,705.1	1,532.1	1,374.3	1,461.3	1,394.4	1,399.9	1,447.6	1,096.2	1,427.5	1,036.8	979.0	1,091.0
Smelter Production — Foreign Ore (Table 1, Item 5)	37.3	31.2	36.6	21.0	31.8	38.0	36.1	29.2	41.3	38.9	37.8	72.8	73.4	40.8	20.3	24.7	15.3	24.0	38.7	43.7	26.8
Smelter Production — Scrap (Table 1, Item 6)	88.4	93.9	114.6	70.7	84.8	77.3	78.9	66.3	69.0	77.8	79.5	49.4	51.0	49.4	59.8	66.4	49.5	67.1	49.7	65.3	47.5
TOTAL SMELTER PRODUCTION	**1,385.5**	**1,460.8**	**1,504.3**	**933.0**	**1,351.3**	**1,662.8**	**1,720.2**	**1,566.3**	**1,759.4**	**1,821.8**	**1,649.4**	**1,496.5**	**1,585.7**	**1,484.6**	**1,480.0**	**1,538.7**	**1,161.0**	**1,518.6**	**1,125.2**	**1,088.0**	**1,165.3**

Source: U.S. Department of the Interior, Bureau of Mines.
p - preliminary
(a) For 1964 thru 1966, CDA used figures for refined production, rather than smelter production, from domestic ores.

Table 1, Item 8.

Imports and exports of blister copper in the United States

COPPER CONTENT, thousands of short tons

	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984[p]
Imports of Blister Copper	389.6	332.5	349.9	269.3	270.7	237.9	224.4	156.7	157.4	154.1	207.8	88.9	43.8	44.7	81.4	75.1	51.8	81.3	114.0	87.6	66.3
Exports of Blister Copper	−4.8	−4.8	−0.7	−21.0	−15.7	−4.3	−7.8	−28.7	−8.5	−7.5	−2.7	−1.5	−2.7	−16.4	−11.4	−8.2	−4.2	−10.2	−2.2	−8.2	−9.2
Net Imports of Blister Copper	**384.8**	**327.7**	**349.2**	**248.3**	**255.0**	**233.6**	**216.6**	**128.0**	**148.9**	**146.6**	**205.1**	**87.4**	**41.1**	**28.3**	**70.0**	**66.9**	**47.6**	**71.1**	**111.8**	**79.4**	**57.1**

Source: U.S. Department of Commerce, Bureau of the Census.
p - preliminary

Table 1, Item 10.

Blister stocks and other

COPPER CONTENT, thousands of short tons

	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984[p]
End-of-Year Blister Copper Stocks	246.0	246.0	270.0	220.0	272.0	291.0	340.0	303.0	282.0	265.0	324.0	312.0	321.0	346.0	290.0	303.1	299.8	305.3	256.8	191.8	255.7
Net Change[(a)]	−6.0	−	24.0	−50.0	52.0	19.0	49.0	−37.0	−21.0	−17.0	59.0	−12.0	9.0	25.0	−56.0	13.1	−3.3	5.5	−48.5	−65.0	63.9
Apparent Change[(b)]	25.8	−17.2	27.9	−22.4	84.1	76.3	92.8	36.2	−33.9	22.1	120.3	91.1	36.5	−32.7	−107.1	−131.2	−175.6	−179.4	−165.3	−200.9r	−149.3

Sources: U.S. Department of the Interior, Bureau of Mines; ABMS.
p - preliminary r - revised
(a) - Net Change — the year-to year increase (+) or decrease (—) of blister copper stocks as reported.
(b) - Apparent Change — the difference between Lines 9 & 11 in Table 1, required to rationalize the CDA flow sheet. Factors other than changes in stocks are included in the apparent change. The sign of the data (+ or —) is opposite that shown in Table 1.

Table 1, Item 13.

Production of refined copper in the United States

COPPER CONTENT, thousands of short tons

	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984[p]
Refined Production - Primary Sources (Table 1, Items 1, 2, 4, 8 & 10)	1,656.3	1,711.8	1,711.0	1,133.0	1,437.4	1,742.8	1,765.1	1,591.8	1,873.2	1,868.5	1,654.7	1,443.4	1,539.3	1,496.2	1,597.3	1,670.4	1,334.7	1,702.0	1,352.6	1,303.0r	1,324.2
Refined Production - Scrap at Smelters (Table 1, Item 6)	88.4	93.9	114.6	70.7	84.8	77.3	78.9	66.3	69.0	77.8	79.5	49.4	51.0	49.4	59.8	66.4	49.5	67.1	49.7	65.3	47.5
Refined Production - Scrap at Refiners (Table 1, Item 12)	245.7	335.1	357.7	322.9	316.8	394.8	398.7	304.3	316.3	366.3	404.4	282.1	300.2	303.0	362.3	441.2	474.3	419.4	452.7	374.9r	281.5
TOTAL REFINED PRODUCTION	**1,990.4**	**2,140.8**	**2,183.3**	**1,526.6**	**1,839.0**	**2,214.9**	**2,242.7**	**1,962.4**	**2,258.5**	**2,312.6**	**2,138.6**	**1,774.9**	**1,890.5**	**1,848.6**	**2,019.4**	**2,178.0**	**1,858.5**	**2,188.5**	**1,855.0**	**1,743.2r**	**1,653.2**

Sources: U.S. Department of the Interior, Bureau of Mines; U.S. Department of Commerce, Bureau of the Census; ABMS.
p - preliminary r - revised

Table 1, Item 14.

Imports and exports of refined copper in the United States

COPPER CONTENT, thousands of short tons

	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984[p]
Imports of Refined Copper	138.0	137.4	162.6	330.3	400.3	131.2	132.1	164.0	192.4	199.9	303.9	146.0	380.7	390.8	455.8	237.2	505.0	391.2	313.9	532.4	555.9
Exports of Refined Copper	−317.0	−330.9	−279.6	−161.6	−251.0	−215.0	−222.0	−187.7	−182.7	−191.1	−126.7	−172.4	−114.6	−63.0	−113.1	−90.1	−23.9	−66.0	−39.7	−97.2	−105.5
Net Imports of Refined Copper	**−179.0**	**−193.5**	**−117.0**	**168.7**	**149.3**	**−83.8**	**−89.9**	**−23.7**	**9.7**	**8.8**	**177.2**	**−26.4**	**266.1**	**327.8**	**342.7**	**147.1**	**481.1**	**325.2**	**274.2**	**435.2**	**450.4**

Source: U.S. Department of Commerce, Bureau of the Census.
p - preliminary

Table 1, Item 15.

Refined stocks and other

COPPER CONTENT, thousands of short tons

	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984[p]
End-of-Year Refined Copper Stocks at:																					
Refineries	42.5	50.4	61.6	41.7	44.9	41.9	142.7	82.7	99.6	43.2	151.6	260.7	272.8	286.7	188.3	78.4	73.4	151.0	210.1	66.1	193.4
Wire Rod Mills	49.0	53.0	80.0	47.0	54.0	63.0	134.0	120.0	75.0	61.0	131.0	140.0	133.0	116.3	69.7	48.7	54.6	120.3	137.8	127.9r	142.2
Brass Mills	56.0	55.0	84.0	51.0	57.0	56.0	49.0	50.0	35.0	43.0	42.0	33.0	39.0	34.2	30.7	27.0	24.5	29.2	28.0	28.7	29.8
Other Processors	5.0	5.0	10.0	5.0	4.0	6.0	4.0	6.0	5.4	5.6	6.9	6.1	7.0	7.0	7.5	10.4	11.3	9.4	8.4	9.2	8.9
Government	1,019.9	897.4	452.4	275.2	261.4	253.4	253.4	251.6	226.6	217.8	35.3	26.2	42.1	22.6	22.5	22.3	22.3	22.3	22.3	22.3	22.3
Commodity Exchange	3.1	10.4	4.1	13.7	11.7	4.0	17.9	20.3	57.8	5.9	43.3	100.0	201.0	184.4	179.6	107.9	179.6	187.6	274.5	409.2	276.3
End-of-Year Total	**1,175.5**	**1,071.2**	**692.1**	**433.6**	**433.0**	**424.3**	**601.0**	**530.6**	**499.4**	**376.5**	**410.1**	**566.0**	**694.9**	**651.2**	**498.3**	**294.7**	**365.7**	**519.8**	**681.1**	**663.4r**	**672.9**
Net Change[(a)]	−31.6	−104.3	−379.1	−258.5	−0.6	−8.7	176.7	−70.4	−31.2	−122.9	33.6	155.9	128.9	−43.7	−152.9	−203.6	71.0	154.1	161.3	−17.7r	9.5
Apparent Change[(b)]	−51.2	−85.7	−310.0	−288.3	109.9	−19.1	102.3	−82.3	30.6	−126.9	112.3	206.2	159.1	−16.8	−59.6	−60.9	280.8	276.6	294.8	221.3r	−146.2

Sources: U.S. Department of the Interior, Bureau of Mines; ABMS.
p - preliminary r - revised
(a) - Net Change – the year-to year increase (+) or decrease (–) of refined copper stocks as reported.
(b) - Apparent Change – the difference between Line 16 and the sum of Lines 13 & 14 in Table 1, required to rationalize the CDA flow sheet. Factors other than changes in stocks are included in the apparent change. The sign of the data (+ or –) is opposite that shown in Table 1.

Table 1, Item 16.

Consumption of refined copper in the United States

COPPER CONTENT, thousands of short tons

	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984[p]
Consumption of Refined Copper by:																					
Wire Rod Mills	1,111.0	1,228.0	1,376.0	1,274.0	1,186.0	1,295.0	1,338.7	1,324.9	1,526.3	1,672.3	1,474.3	1,061.3	1,364.0	1,511.2	1,672.7	1,653.0	1,442.8	1,597.9	1,359.0	1,360.1r	1,561.2
Brass Mills	711.1	766.2	939.7	658.9	653.6	799.1	660.6	655.8	667.2	714.4	670.2	439.0	584.8	628.6	682.6	672.6	564.0	591.1	433.4	551.4	637.3
Ingot Makers	3.5	4.4	17.7	8.6	5.7	6.7	6.8	4.5	6.0	6.1	9.2	4.5	7.5	6.6	8.2	6.9	5.5	6.0	4.8	4.9	5.7
Foundries	19.2	16.0	21.4	22.2	14.9	23.8	23.7	17.5	17.9	30.6	28.7	21.7	21.0	22.5	22.1	19.9	18.2	17.7	15.1	15.6	17.5
Powder Plants	7.8	9.4	13.1	6.5	7.7	9.8	6.5	7.2	9.5	12.7	12.0	6.8	11.8	11.3	11.5	11.6	8.3	8.3	7.5	8.5	9.5
Other Industries[(a)]	10.0	9.0	8.4	13.4	10.5	15.8	14.2	11.1	10.7	12.2	9.1	9.0	8.4	13.0	24.6	22.0	20.0	16.1	14.6	16.6r	18.6
TOTAL REFINED CONSUMPTION	**1,862.6**	**2,033.0**	**2,376.3**	**1,983.6**	**1,878.4**	**2,150.2**	**2,050.5**	**2,021.0**	**2,237.6**	**2,448.3**	**2,203.5**	**1,542.3**	**1,997.5**	**2,193.2**	**2,421.7**	**2,386.0**	**2,058.8**	**2,237.1**	**1,834.4**	**1,957.1r**	**2,249.8**

Sources: U.S. Department of the Interior, Bureau of Mines; U.S. Department of Commerce, Bureau of the Census; ABMS.
p - preliminary r - revised
(a) - Chemical, steel, aluminum and other industries.

Table 2

Supply of secondary copper from receipt to consumption by brass mills, ingot makers, foundries, powder plants and other industries

COPPER CONTENT, thousands of short tons

	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984[p]
(1) Receipts of Domestic Scrap	1,309.4	1,438.4	1,468.5	1,309.3	1,368.2	1,552.8	1,447.6	1,334.9	1,440.8	1,560.9	1,504.3	1,113.0	1,271.1	1,318.4	1,426.9	1,661.6	1,541.8	1,509.0	1,304.5	1,300.3r	1,333.9
(2) Net Scrap Exports (page 12)[(a)]	−88.7	−62.6	−18.1	−45.1	−75.6	−46.9	−79.0	−50.7	−39.2	−81.4	−70.5	−84.3	−54.1	−58.5	−95.9	−100.7	−120.8	−80.0	−81.8	−45.9	−98.8
(3) Scrap Stocks (page 12)	11.0	−2.0	−5.0	−18.0	32.0	−15.0	−13.0	17.0	7.0	−2.0	−3.0	5.0	−19.0	−10.9	22.7	−10.6	12.1	−10.0	9.2	7.3	9.2
(4) Recovery From Copper-Base Scrap (page 13)	1,231.7	1,373.8	1,445.4	1,246.2	1,323.6	1,490.9	1,355.6	1,301.2	1,408.6	1,477.5	1,430.8	1,033.7	1,198.0	1,249.0	1,353.7	1,550.3	1,433.1	1,419.0	1,231.9	1,261.7r	1,244.3
(5) Recovery From Other Scrap (page 13)	14.4	16.2	16.9	16.4	16.0	19.0	16.8	17.0	19.7	21.1	21.1	28.1	35.7	37.9	39.8	42.5	38.9	41.6	40.2	42.6r	41.7
(6) Total Scrap Recovery (page 13)	1,246.1	1,390.0	1,462.3	1,262.6	1,339.6	1,509.9	1,372.4	1,318.2	1,428.3	1,498.6	1,451.9	1,061.8	1,233.7	1,286.9	1,393.5	1,592.8	1,472.0	1,460.6	1,272.1	1,304.3r	1,286.0
(7) Smelter Production From Scrap	−88.4	−93.9	−114.6	−70.7	−84.8	−77.3	−78.9	−66.3	−69.0	−77.8	−79.5	−49.4	−51.0	−49.4	−59.8	−66.4	−49.5	−67.1	−49.7	−65.3	−47.5
(8) Refined Production From Scrap	−245.7	−335.1	−357.7	−322.9	−316.8	−394.8	−398.7	−304.3	−316.3	−366.3	−404.4	−282.1	−300.2	−303.0	−362.3	−441.2	−474.3	−419.4	−452.7	−374.9r	−281.5
(9) Consumption of Scrap (page 13)	912.0	961.0	990.0	869.0	938.0	1,037.8	894.8	947.6	1,043.0	1,054.5	968.0	730.3	882.5	934.5	971.4	1,085.2	948.2	974.1	769.7	864.1	957.0

Sources: U.S. Department of the Interior, Bureau of Mines; U.S. Department of Commerce, Bureau of the Census; ABMS.

p - preliminary r - revised

(a) - Negative (−) signs denote net exports.

Table 2, Item 2.

Imports and exports of copper-base scrap in the United States

	COPPER CONTENT, thousands of short tons																				
	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984[p]
Imports of Copper-Base Scrap	5.2	16.8	31.7	11.4	12.5	7.7	3.8	13.8	18.8	27.1	41.7	20.2	29.4	28.6	28.8	32.0	32.5	38.8	38.8	60.1	59.6
Exports of Copper-Base Scrap	−93.9	−79.4	−49.8	−56.5	−89.1	−54.6	−82.8	−64.5	−58.0	−108.5	−112.2	−104.5	−83.5	−87.1	−124.7	−132.7	−153.3	−118.8	−120.6	−106.0	−158.4
Net Exports of Copper-Base Scrap[(a)]	**−88.7**	**−62.6**	**−18.1**	**−45.1**	**−76.6**	**−46.9**	**−79.0**	**−50.7**	**−39.2**	**−81.4**	**−70.5**	**−84.3**	**−54.1**	**−58.5**	**−95.9**	**−100.7**	**−120.8**	**−80.0**	**−81.8**	**−45.9**	**−98.8**

Sources: U.S. Department of Commerce, Bureau of the Census; ABMS.
p - preliminary
(a) - The negative (−) sign for each year is used to be consistent with the convention used in Tables 1, 2 and 4 — namely that imports are **additions** to the domestic flow, and therefore (+), while exports are **subtractions** from the flow, and therefore (−).

Table 2, Item 3.

Copper-base scrap stocks

	COPPER CONTENT, thousands of short tons																				
	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984[p]
Scrap Copper-Base Stocks at:																					
Brass Mills	30.0	39.0	44.0	61.0	39.0	39.0	43.0	37.0	36.0	44.0	45.0	45.0	48.0	54.7	44.4	45.6	44.9	39.7	45.6	39.8	40.3
Secondary Smelters	22.0	21.0	23.0	26.0	22.0	21.0	19.0	24.0	22.0	23.0	24.0	27.0	28.0	33.2	26.0	30.1	30.5	41.7	23.7	18.0	23.5
Primary Producers	31.0	28.0	29.0	22.0	20.0	36.0	49.0	27.0	24.0	19.0	18.0	12.0	25.0	27.7	22.1	27.5	16.6	19.1	23.7	28.2	14.3
Foundries	14.0	11.0	8.0	13.0	10.0	10.0	8.0	14.0	13.0	11.0	13.0	11.0	13.0	11.3	10.8	10.7	9.9	11.1	9.8	9.5	8.5
Other Processors	5.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	3.0	4.0	2.0	2.9	2.9	2.8	3.1	2.7	2.7	2.4
End-of-Year Total	**102.0**	**104.0**	**109.0**	**127.0**	**95.0**	**110.0**	**123.0**	**106.0**	**99.0**	**101.0**	**104.0**	**99.0**	**118.0**	**128.9**	**106.2**	**116.8**	**104.7**	**114.7**	**105.5**	**98.2**	**89.0**
Net Change[(a)]	−11.0	2.0	5.0	18.0	−32.0	15.0	13.0	−17.0	−7.0	2.0	3.0	−5.0	19.0	10.9	−22.7	10.6	−12.1	10.0	−9.2	−7.3	−9.2

Sources: U.S. Department of the Interior, Bureau of Mines; ABMS.
p - preliminary
(a) - Net Change — the year-to-year increase (+) or decrease (−) of stocks as reported. The sign of the data (+ or −) is opposite that shown in Table 2.

Table 2, Item 6.

Recovery of copper from scrap

	COPPER CONTENT, thousands of short tons																				
	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984[p]
Copper Recovered From Copper-Base Scrap																					
New Scrap	666.1	765.9	818.3	673.7	719.9	804.9	734.2	752.5	854.4	901.9	864.2	593.6	716.1	731.2	790.4	947.0	828.6	833.6	680.3	707.3r	727.9
Old Scrap	565.6	607.9	627.1	572.5	603.7	686.0	621.4	548.7	554.2	575.6	566.6	440.1	481.9	517.8	563.3	603.3	604.5	585.4	551.0	554.4r	516.4
Total (Table 2, Item 4)	1,231.7	1,373.8	1,445.4	1,246.2	1,323.6	1,490.9	1,355.6	1,301.2	1,408.6	1,477.5	1,430.8	1,033.7	1,198.0	1,249.0	1,353.7	1,550.3	1,433.1	1,419.0	1,231.9	1,261.7r	1,244.3
Copper Recovered From Scrap Other Than Copper-Base																					
New Scrap	9.2	9.8	10.1	10.2	10.7	12.9	11.5	10.7	13.0	14.3	14.0	17.4	20.7	21.9	22.9	24.5	22.5	24.8	22.4	22.5	23.1
Old Scrap	5.2	6.4	6.8	6.2	5.3	6.1	5.3	6.3	6.7	6.8	7.1	10.7	15.0	16.0	16.9	18.0	16.4	16.8	17.8	20.1r	18.6
Total (Table 2, Item 5)	14.4	16.2	16.9	16.4	16.0	19.0	16.8	17.0	19.7	21.1	21.1	28.1	35.7	37.9	39.8	42.5	38.9	41.6	40.2	42.6r	41.7
Copper Recovered From All Scrap																					
New Scrap	675.3	775.7	828.4	683.9	730.6	817.8	745.7	763.2	867.4	916.2	878.2	611.0	736.8	753.1	813.3	971.5	851.1	858.4	702.7	729.8r	751.0
Old Scrap	570.8	614.3	633.9	578.7	609.0	692.1	626.7	555.0	560.9	582.4	573.7	450.8	496.9	533.8	580.2	621.3	620.9	602.2	569.4	574.5r	535.0
Total Copper Recovered (Table 2, Item 6)	1,246.1	1,390.0	1,462.3	1,262.6	1,339.6	1,509.9	1,372.4	1,318.2	1,428.3	1,498.6	1,451.9	1,061.8	1,233.7	1,286.9	1,393.5	1,592.8	1,472.0	1,460.6	1,272.1	1,304.3r	1,286.0

Sources: U.S. Department of the Interior, Bureau of Mines; ABMS.
p - preliminary r - revised

Table 2, Item 9.

Consumption of copper scrap in the United States

	COPPER CONTENT, thousands of short tons																				
	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984[p]
Consumption of Copper Scrap by:																					
Brass Mills	438.5	465.9	485.7	406.9	475.9	516.6	446.5	496.6	578.4	612.5	563.0	406.3	519.3	531.9	541.7	608.0	532.3	559.3	448.2	540.9	583.8
Ingot Makers	266.8	283.4	293.0	271.9	278.8	290.3	241.4	257.9	250.5	236.7	215.0	164.0	173.0	195.0	205.5	238.2	214.0	213.0	173.2	176.4	209.1
Foundries	145.5	148.9	144.0	133.6	126.6	147.4	129.7	113.4	121.7	122.7	115.4	90.9	95.7	101.2	105.2	113.0	87.0	84.7	72.1	74.3	83.4
Powder Plants	16.1	15.9	15.3	16.1	18.1	16.5	12.2	16.5	16.0	17.3	17.7	11.6	16.8	18.3	18.5	18.1	12.8	12.9	10.1	13.2	14.8
Other Industries[(a)]	45.1	46.9	52.0	40.5	38.6	67.0	65.0	63.2	76.4	65.3	56.9	57.5	77.7	88.1	100.5	107.9	102.1	104.2	66.1	59.3	65.9
TOTAL COPPER CONSUMED	912.0	961.0	990.0	869.0	938.0	1,037.8	894.8	947.6	1,043.0	1,054.5	968.0	730.3	882.5	934.5	971.4	1,085.2	948.2	974.1	769.7	864.1	957.0

Sources: U.S. Department of the Interior, Bureau of Mines; U.S. Department of Commerce, Bureau of the Census; ABMS.
p - preliminary r - revised
(a) - Chemical, steel, aluminum and other industries.

Table 3

Consumption of metals by wire rod mills, brass mills, ingot makers, foundries, powder plants and other industries

METAL CONTENT, thousands of short tons

	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984[p]
(1) Consumption of Refined Copper (Table 1, Item 16)	1,862.6	2,033.0	2,376.3	1,983.6	1,878.4	2,150.2	2,050.5	2,021.0	2,237.6	2,448.3	2,203.5	1,542.3	1,997.5	2,193.2	2,421.7	2,386.0	2,058.8	2,237.1	1,834.4	1,957.1r	2,246.8
(2) Consumption of Copper in Scrap (Table 2, Item 9)	912.0	961.0	990.0	869.0	938.0	1,037.8	894.8	947.5	1,043.0	1,054.5	968.0	730.3	882.5	934.5	971.4	1,085.2	948.2	974.1	769.7	864.1	957.0
(3) Total Copper Consumed (page 15)	**2,774.6**	**2,994.0**	**3,366.3**	**2,852.6**	**2,816.4**	**3,188.0**	**2,945.3**	**2,968.6**	**3,280.6**	**3,502.8**	**3,171.5**	**2,272.6**	**2,880.0**	**3,127.7**	**3,393.1**	**3,471.2**	**3,007.0**	**3,211.2**	**2,604.1**	**2,821.2r**	**3,206.8**
(4) Consumption of Zinc	273.7	292.5	356.0	274.7	327.1	376.3	288.1	316.3	387.0	381.0	347.2	234.7	323.1	328.8	347.8	358.9	298.1	313.7	246.6	302.6r	350.1
(5) Consumption of Lead	36.8	37.9	39.5	30.9	31.7	33.7	27.4	25.6	26.1	28.8	28.1	19.7	26.0	30.0	30.1	30.8	25.7	26.0	22.4	25.7r	29.0
(6) Consumption of Tin	20.2	21.3	23.1	19.7	19.3	19.4	15.9	15.2	22.6	16.3	16.2	11.7	14.4	16.7	16.4	16.4	14.2	14.5	11.7	12.4r	14.6
(7) Consumption of Nickel	8.4	13.3	12.6	10.8	6.6	10.1	10.3	11.5	11.2	17.2	12.0	12.0	9.7	8.1	7.4	11.2	10.6	14.3	5.8	8.9r	9.4
(8) Total Alloying Metal Consumed (page 16)	**339.1**	**365.0**	**431.2**	**336.1**	**384.7**	**439.5**	**341.7**	**368.6**	**446.9**	**443.3**	**403.5**	**278.1**	**373.2**	**383.6**	**401.7**	**417.3**	**348.6**	**368.5**	**286.5**	**349.6r**	**403.1**
(9) Total Metal Consumed	**3,113.7**	**3,359.0**	**3,797.5**	**3,188.7**	**3,201.1**	**3,627.5**	**3,287.0**	**3,337.2**	**3,727.5**	**3,946.1**	**3,575.0**	**2,550.7**	**3,253.2**	**3,511.3**	**3,794.8**	**3,888.5**	**3,355.6**	**3,579.7**	**2,890.6**	**3,170.8r**	**3,609.9**
(10) Ingot Consumed (page 17)[(a)]	308.5	331.2	342.0	323.9	326.5	336.6	256.8	276.4	301.3	300.0	284.7	194.3	236.5	258.2	256.6	266.2	235.6	239.6	191.8	196.6r	220.5
(11) Ingot Stocks & Other (page 17)[(a,b)]	−38.3	−34.7	−55.1	−31.6	−37.6	−43.6	−55.9	−56.6	−32.1	−10.9	−7.2	−24.7	−7.2	−14.2	−21.4	−44.0	−41.2	−43.0	−41.1	−47.0r	−68.0
(12) Net Metal Consumed (page 17)	**3,075.4**	**3,324.3**	**3,742.4**	**3,157.1**	**3,163.3**	**3,583.9**	**3,231.1**	**3,280.6**	**3,695.4**	**3,935.2**	**3,567.8**	**2,526.0**	**3,246.0**	**3,497.1**	**3,773.4**	**3,844.5**	**3,314.4**	**3,536.7**	**2,849.5**	**3,123.8r**	**3,541.9**
(13) Wire Rod Mills - Net Metal Consumed (page 17)	1,111.0	1,228.0	1,376.0	1,274.0	1,186.0	1,295.0	1,338.7	1,324.9	1,526.3	1,672.3	1,474.3	1,061.3	1,364.0	1,511.2	1,672.7	1,653.0	1,442.8	1,597.9	1,359.0	1,360.1r	1,561.2
(14) Wire Rod & Wire Mills - Metal Stocks & Other	−115.5	−139.5	−129.0	−96.0	−79.5	−33.0	−127.2	−80.9	−176.3	−213.3	−151.8	−29.8	−165.0	−85.2	−175.2	−116.0	−43.8	−158.4	−52.5r	−34.1r	−179.7
(15) Wire Mills - Metal Contained in Products Supplied (Table 4, Item 10)	995.5	1,088.5	1,247.0	1,178.0	1,106.5	1,262.0	1,211.5	1,244.0	1,350.0	1,459.0	1,322.5	1,031.5	1,199.0	1,426.0	1,497.5	1,537.0	1,399.0	1,439.5	1,306.5r	1,326.0r	1,381.5
(16) Brass Mills - Net Metal Consumed (page 17)	1,395.5	1,502.2	1,753.9	1,312.8	1,421.2	1,657.3	1,371.4	1,448.5	1,615.4	1,700.2	1,577.6	1,067.2	1,407.3	1,464.6	1,549.6	1,619.3	1,380.6	1,461.1	1,116.4	1,383.4r	1,554.7
(17) Brass Mills - Metal Stocks & Other	−2.5	−13.7	−91.4	−14.8	−43.2	−102.3	−118.4	−106.5	−111.4	−63.7	−167.1	−36.2	−115.8	−94.1	−97.6	−101.3	−122.1	−153.6	−106.4	−202.9r	−197.2
(18) Brass Mills - Metal Contained in Products Supplied (Table 4, Item 16)	1,393.0	1,488.5	1,662.5	1,298.0	1,378.0	1,555.0	1,253.0	1,342.0	1,504.0	1,636.5	1,410.5	1,031.0	1,291.5	1,370.5	1,452.0	1,518.0	1,258.5	1,307.5	1,010.0	1,180.5	1,357.5
(19) Foundries - Net Metal Consumed (page 17)	457.6	476.9	470.3	419.4	422.6	468.1	378.0	364.6	394.0	404.9	380.3	276.0	299.4	326.2	346.2	353.5	297.5	292.4	235.7	243.8r	273.9
(20) Foundries - Metal Stocks & Other	−12.1	−32.4	−15.3	−19.9	−27.1	−41.6	−2.5	−12.1	−12.5	−14.9	−44.8	−16.0	−24.9	−36.2	−56.2	−45.0	−53.0	−54.4	−33.2	−32.8r	−38.4
(21) Foundries - Metal Contained in Products Supplied (Table 4, Item 21)	445.5	444.5	455.0	399.5	395.5	426.5	375.5	352.5	381.5	390.0	335.5	260.0	274.5	290.0	290.0	308.5	244.5	238.0	202.5	211.0	235.5
(22) Powder Plants - Net Metal Consumed (page 17)	31.7	34.2	38.7	34.1	37.1	38.0	29.7	32.3	34.6	41.3	36.6	21.8	34.4	36.5	37.4	36.6	26.0	26.1	21.7	26.8	30.0
(23) Powder Plants - Metal Stocks & Other	−3.2	−3.2	−5.2	−6.1	−6.1	−7.5	−6.2	−6.3	−7.6	−9.3	−2.1	1.2	−1.9	−4.5	−9.4r	−9.6r	−7.0r	−4.1r	−4.7	−7.3r	−8.5
(24) Powder Plants - Metal Contained in Products Supplied (Table 4, Item 22)	28.5	31.0	33.5	28.0	31.0	30.5	23.5	26.0	27.0	32.0	34.5	23.0	32.5	32.0	28.0r	27.0r	19.0r	22.0r	17.0	19.5r	21.5
(25) Other Industries - Net Metal Consumed (page 17)[(c)]	79.6	83.0	103.5	116.8	96.4	125.5	113.3	110.3	125.1	116.5	99.0	99.7	140.9	158.6	167.5	182.1	167.5	159.2	116.7	109.7r	122.1

Sources: U.S. Department of the Interior, Bureau of Mines; ABMS.

p - preliminary r - revised

(a) - Ingot makers consume refined copper, scrap copper and alloying metal, and ship to foundries, brass mills, powder plants and other industries.

(b) - The difference between the copper and alloying metal consumed by ingot makers and the ingot consumed by the customers of the ingot makers. This difference consists of melting and other losses in producing ingot, stock changes, and other factors.

(c) - Chemical, steel, aluminum and other industries.

Table 3, Item 3.

Consumption of copper by wire rod mills, brass mills, ingot makers, foundries, powder plants and other industries

	COPPER CONTENT, thousands of short tons																			
	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984[p]
Consumption of Copper by:																					
Wire Rod Mills – Refined	1,111.0	1,228.0	1,376.0	1,274.0	1,186.0	1,295.0	1,338.7	1,324.9	1,526.3	1,672.3	1,474.3	1,061.3	1,364.0	1,511.2	1,672.7	1,653.0	1,442.8	1,597.9	1,359.0	1,360.1r	1,561.2
Brass Mills[a]																					
Refined	711.1	766.2	939.7	658.9	653.6	799.1	660.6	655.8	667.2	714.4	670.2	439.0	584.8	628.6	682.6	672.6	564.0	591.1	433.4	551.4	637.3
Scrap	438.5	465.9	485.7	406.9	475.9	516.6	446.5	496.6	578.4	612.5	563.0	406.3	519.3	531.9	541.7	608.0	532.3	559.3	448.2	540.9	583.8
Total	1,149.6	1,232.1	1,425.4	1,065.8	1,129.5	1,315.7	1,107.1	1,152.4	1,245.6	1,326.9	1,233.2	845.3	1,104.1	1,160.5	1,224.3	1,280.6	1,096.3	1,150.4	881.6	1,092.3	1,221.1
Ingot Makers[b]																					
Refined	3.5	4.4	17.7	8.6	5.7	6.7	6.8	4.5	6.0	6.1	9.2	4.5	7.5	6.6	8.2	6.9	5.5	6.0	4.8	4.9	5.7
Scrap	266.8	283.4	293.0	271.9	278.8	290.3	241.4	257.9	250.5	236.7	215.0	164.0	173.0	195.0	205.5	238.2	214.0	213.0	173.2	176.4	209.1
Total	270.3	287.8	310.7	280.5	284.5	297.0	248.2	262.4	256.5	242.8	224.2	168.5	180.5	201.6	213.7	245.1	219.5	219.0	178.0	181.3	214.8
Foundries[a]																					
Refined	19.2	16.0	21.4	22.2	14.9	23.8	23.7	17.5	17.9	30.6	28.7	21.7	21.0	22.5	22.1	19.9	18.2	17.7	15.1	15.6	17.5
Scrap	145.5	148.9	144.0	133.6	126.6	147.4	129.7	113.4	121.7	122.7	115.4	90.9	95.7	101.2	105.2	113.0	87.0	84.7	72.1	74.3	83.4
Total	164.7	164.9	165.4	155.8	141.5	171.2	153.4	130.9	139.6	153.3	144.1	112.6	116.7	123.7	127.3	132.9	105.2	102.4	87.2	89.9	100.9
Powder Plants[a]																					
Refined	7.8	9.4	13.1	6.5	7.7	9.8	6.5	7.2	9.5	12.7	12.0	6.8	11.8	11.3	11.5	11.6	8.3	8.3	7.5	8.5	9.5
Scrap	16.1	15.9	15.3	16.1	18.1	16.5	12.2	16.5	16.0	17.3	17.7	11.6	16.8	18.3	18.5	18.1	12.8	12.9	10.1	13.2	14.8
Total	23.9	25.3	28.4	22.6	25.8	26.3	18.7	23.7	25.5	30.0	29.7	18.4	28.6	29.6	30.0	29.7	21.1	21.2	17.6	21.7	24.3
Other Industries[a,c]																					
Refined	10.0	9.0	8.4	13.4	10.5	15.8	14.2	11.1	10.7	12.2	9.1	9.0	8.4	13.0	24.6	22.0	20.0	16.1	14.6	16.6r	18.6
Scrap	45.1	46.9	52.0	40.5	38.6	67.0	65.0	63.2	76.4	65.3	56.9	57.5	77.7	88.1	100.5	107.9	102.1	104.2	66.1	59.3	65.9
Total	55.1	55.9	60.4	53.9	49.1	82.8	79.2	74.3	87.1	77.5	66.0	66.5	86.1	101.1	125.1	129.9	122.1	120.3	80.7	75.9r	84.5
All Industries																					
Refined (Table 1, Item 16)	1,862.6	2,033.0	2,376.3	1,983.6	1,878.4	2,150.2	2,050.5	2,021.0	2,237.6	2,448.3	2,203.5	1,542.3	1,997.5	2,193.2	2,421.7	2,386.0	2,058.8	2,237.1	1,834.4	1,957.1r	2,249.8
Scrap (Table 2, Item 9)	912.0	961.0	990.0	869.0	938.0	1,037.8	894.8	947.6	1,043.0	1,054.5	968.0	730.3	882.5	934.5	971.4	1,085.2	948.2	974.1	769.7	864.1	957.0
TOTAL COPPER CONSUMED (Table 3, Item 3)	2,774.6	2,994.0	3,366.3	2,852.6	2,816.4	3,188.0	2,945.3	2,968.6	3,280.6	3,502.8	3,171.5	2,272.6	2,880.0	3,127.7	3,393.1	3,471.2	3,007.0	3,211.2	2,604.1	2,821.2r	3,206.8

Sources: U.S. Department of the Interior, Bureau of Mines; ABMS.
p - preliminary r - revised
(a) - Direct consumption only: not including consumption of copper in ingots from ingot makers.
(b) - Ingot makers consume refined copper, scrap cooper and alloying metal, and ship to foundries, brass mills, powder plants and other industries.
(c) - Chemical, steel, aluminum and other industries.

Table 3, Item 8.

Consumption of alloying metal by brass mills, ingot makers, foundries and powder plants

ALLOYING METAL CONTENT, thousands of short tons

	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984[p]
Consumption of Alloying Metal by:																					
Brass Mills[a]																					
Zinc-Slab	122.3	114.4	169.3	116.9	145.9	158.7	112.2	134.8	177.4	183.6	167.6	104.8	153.1	154.5	162.2	167.0	138.0	147.9	111.7	130.6	151.5
Zinc in Scrap	100.3	126.4	129.9	108.9	126.7	156.6	128.8	129.8	156.2	149.2	132.6	94.7	124.5	125.5	139.8	147.3	122.1	122.3	98.9	128.0r	147.1
Lead-Refined	3.0	3.5	3.9	2.3	2.8	3.7	2.5	3.1	3.8	4.9	4.1	2.0	3.5	3.3	3.7	3.9	2.7	2.8	1.6	3.2	2.6
Lead in Scrap	4.6	5.2	5.3	2.9	3.6	4.7	3.2	2.9	3.6	3.6	3.3	2.3	3.4	4.5	3.8	4.0	3.3	3.1	2.4	3.5r	4.0
Tin-Refined	1.0	1.2	1.5	1.2	1.2	1.5	1.2	1.1	1.0	1.1	1.1	0.6	0.8	0.7	0.8	0.8	0.8	0.8	0.4	0.5	0.6
Tin in Scrap	0.3	0.3	0.4	0.5	0.5	0.7	0.5	0.4	0.5	0.5	0.5	0.3	0.3	0.6	0.5	0.5	0.4	0.3	0.4	0.5	0.6
Nickel-Refined	5.4	9.3	5.2	3.6	3.4	5.9	5.1	6.1	6.5	5.4	7.1	7.5	5.5	4.6	4.8	7.6	8.4	11.3	3.5	5.3	5.2
Nickel in Scrap	2.4	3.3	6.4	6.3	2.4	3.3	4.6	4.7	4.1	10.5	4.2	4.1	3.8	3.1	2.2	3.1	1.8	2.6	1.9	3.2r	3.7
Total	239.3	263.6	321.9	242.6	286.5	335.1	258.1	282.9	353.1	358.8	320.5	216.3	294.9	296.8	317.8	334.2	277.5	291.1	220.8	274.8r	315.3
Ingot Makers																					
Zinc-Slab	8.6	7.4	9.4	8.1	12.2	13.6	9.9	10.4	7.1	6.9	8.2	6.6	7.7	8.3	7.3	7.5	18.9	22.2	14.6	18.1r	21.4
Zinc in Scrap	31.3	33.0	35.2	31.3	32.8	34.5	26.7	31.2	33.9	29.4	28.2	20.8	26.8	29.1	25.0	25.2	9.9	12.2	14.2	17.6r	20.8
Lead in Scrap	20.7	21.3	23.6	20.1	19.9	20.1	16.1	16.8	16.2	18.0	18.1	13.4	16.9	19.7	19.2	19.4	17.1	17.5	16.5	16.8	19.9
Tin in Scrap	15.3	15.7	17.2	14.6	14.1	14.1	11.2	11.5	19.1	12.5	12.5	9.3	11.4	13.3	12.4	12.5	11.0	11.3	9.2	9.4	11.1
Nickel in Scrap	0.6	0.7	1.0	0.9	0.8	0.9	0.6	0.7	0.6	1.3	0.7	0.4	0.4	0.4	0.4	0.5	0.4	0.4	0.4	0.4	0.5
Total	76.5	78.1	86.4	75.0	79.8	83.2	64.5	70.6	76.9	68.1	67.7	50.5	63.2	70.8	64.3	65.1	57.3	63.6	54.9	62.3r	73.7
Foundries[a]																					
Zinc-Slab	3.3	3.1	3.4	2.3	2.3	6.0	4.6	4.5	6.8	6.0	4.4	3.1	4.2	4.5	4.9	4.0	3.1	3.2	2.4	2.5r	2.8
Zinc in Scrap	4.6	4.3	4.4	3.4	3.4	3.4	3.2	2.7	2.8	2.7	3.5	3.0	4.1	4.2	5.6	5.2	4.2	4.0	3.2	3.8r	4.3
Lead in Scrap	8.5	7.9	6.7	5.6	5.4	5.2	5.6	2.8	2.5	2.3	2.6	2.0	2.2	2.5	3.4	3.5	2.6	2.6	1.9	2.2r	2.5
Tin in Scrap	2.9	2.7	2.4	2.0	1.9	1.8	2.0	1.1	1.0	1.0	1.1	0.9	0.9	1.1	1.6	1.6	1.3	1.4	1.1	1.3r	1.5
Total	19.3	18.0	16.9	13.3	13.0	16.4	15.4	11.1	13.1	12.0	11.6	9.0	11.4	12.3	15.5	14.3	11.2	11.2	8.6	9.8r	11.1
Powder Plants[a]																					
Zinc-Slab	0.9	2.0	3.5	3.0	1.6	1.2	1.0	0.7	0.7	1.1	1.3	0.8	1.2	1.6	1.6	1.6	1.1	1.1	0.9	1.1	1.2
Zinc in Scrap	2.4	1.9	0.9	0.8	2.2	2.3	1.7	2.2	2.1	2.1	1.4	0.9	1.5	1.1	1.4	1.1	0.8	0.8	0.7	0.9	1.0
Tin-Refined	0.7	1.4	1.6	1.4	1.6	1.3	1.0	1.1	1.0	1.2	1.0	0.6	1.0	1.0	1.1	1.0	0.7	0.7	0.6	0.7	0.8
Total	4.0	5.3	6.0	5.2	5.4	4.8	3.7	4.0	3.8	4.4	3.7	2.3	3.7	3.7	4.1	3.7	2.6	2.6	2.2	2.7	3.0
All Industries																					
Zinc-Slab	135.1	126.9	185.6	130.3	162.0	179.5	127.7	150.4	192.0	197.6	181.5	115.3	166.2	168.9	176.0	180.1	161.1	174.4	129.6	152.3r	176.9
Zinc in Scrap	138.6	165.6	170.4	144.4	165.1	196.8	160.4	168.9	196.0	183.4	168.7	119.4	156.9	159.9	171.8	178.8	137.0	139.3	117.0	150.3r	173.2
Lead-Refined	3.0	3.5	3.9	2.3	2.8	3.7	2.5	3.1	3.8	4.9	4.1	2.0	3.5	3.3	3.7	3.9	2.7	2.8	1.6	3.2	2.6
Lead in Scrap	33.8	34.4	35.6	28.6	28.9	30.0	24.9	22.5	22.3	23.9	24.0	17.7	22.5	26.7	26.4	26.9	23.0	23.2	20.8	22.5r	26.4
Tin-Refined	1.7	2.6	3.1	2.6	2.8	2.8	2.2	2.2	2.0	2.3	2.1	1.2	1.8	1.7	1.9	1.8	1.5	1.5	1.0	1.2	1.4
Tin in Scrap	18.5	18.7	20.0	17.1	16.5	16.6	13.7	13.0	20.6	14.0	14.1	10.5	12.6	15.0	14.5	14.6	12.7	13.0	10.7	11.2r	13.2
Nickel-Refined	5.4	9.3	5.2	3.6	3.4	5.9	5.1	6.1	6.5	5.4	7.1	7.5	5.5	4.6	4.8	7.6	8.4	11.3	3.5	5.3	5.2
Nickel in Scrap	3.0	4.0	7.4	7.2	3.2	4.2	5.2	5.4	4.7	11.8	4.9	4.5	4.2	3.5	2.6	3.6	2.2	3.0	2.3	3.6r	4.2
TOTAL ALLOYING METAL CONSUMED (Table 3, Item 8)	339.1	365.0	431.2	336.1	384.7	439.5	341.7	368.6	446.9	443.3	403.5	278.1	373.2	383.6	401.7	417.3	348.6	368.5	286.5	349.6r	403.1

Sources: U.S. Department of the Interior, Bureau of Mines; ABMS.
p - preliminary r - revised
(a) - Direct consumption only: not including consumption of alloying metal in ingots from ingot makers.

Table 3, Item 12.

Net consumption of metals by wire rod mills, brass mills, foundries, powder plants, and other industries

	METAL CONTENT, thousands of short tons																				
	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984[p]
Net Metal Consumed by:																					
Wire Rod Mills - Copper (Table 3, Item 13)	1,111.0	1,228.0	1,376.0	1,274.0	1,186.0	1,295.0	1,338.7	1,324.9	1,526.3	1,672.3	1,474.3	1,061.3	1,364.0	1,511.2	1,672.7	1,653.0	1,442.8	1,597.9	1,359.0	1,360.1r	1,561.2
Brass Mills																					
Copper	1,149.6	1,232.1	1,425.4	1,065.8	1,129.5	1,315.7	1,107.1	1,152.4	1,245.6	1,326.9	1,233.2	845.3	1,104.1	1,160.5	1,224.3	1,280.6	1,096.3	1,150.4	881.6	1,092.3	1,221.1
Alloy	239.3	263.6	321.9	242.6	286.5	335.1	258.1	282.9	353.1	358.8	320.5	216.3	294.9	296.8	317.8	334.2	277.5	291.1	220.8	274.8r	315.3
Ingot	6.6	6.5	6.6	4.4	5.2	6.5	6.2	13.2	16.7	14.5	23.9	5.6	8.3	7.3	7.5	4.5	6.8	19.6	14.0	16.3r	18.3
Total (Table 3, Item 16)	1,395.5	1,502.2	1,753.9	1,312.8	1,421.2	1,657.3	1,371.4	1,448.5	1,615.4	1,700.2	1,577.6	1,067.2	1,407.3	1,464.6	1,549.6	1,619.3	1,380.6	1,461.1	1,116.4	1,383.4r	1,554.7
Foundries																					
Copper	164.7	164.9	165.4	155.8	141.5	171.2	153.4	130.9	139.6	153.3	144.1	112.6	116.7	123.7	127.3	132.9	105.2	102.4	87.2	89.9	100.9
Alloy	19.3	18.0	16.9	13.3	13.0	16.4	15.4	11.1	13.1	12.0	11.6	9.0	11.4	12.3	15.5	14.3	11.2	11.2	8.6	9.8r	11.1
Ingot	273.6	294.0	288.0	250.3	268.1	280.5	209.2	222.6	241.3	239.6	224.6	154.4	171.3	190.2	203.4	206.3	181.1	178.8	139.9	144.1r	161.9
Total (Table 3, Item 19)	457.6	476.9	470.3	419.4	422.6	468.1	378.0	364.6	394.0	404.9	380.3	276.0	299.4	326.2	346.2	353.5	297.5	292.4	235.7	243.8r	273.9
Powder Plants																					
Copper	23.9	25.3	28.4	22.6	25.8	26.3	18.7	23.7	25.5	30.0	29.7	18.4	28.6	29.6	30.0	29.7	21.1	21.2	17.6	21.7	24.3
Alloy	4.0	5.3	6.0	5.2	5.4	4.8	3.7	4.0	3.8	4.4	3.7	2.3	3.7	3.7	4.1	3.7	2.6	2.6	2.2	2.7	3.0
Ingot	3.8	3.6	4.3	6.3	5.9	6.9	7.3	4.6	5.3	6.9	3.2	1.1	2.1	3.2	3.3	3.2	2.3	2.3	1.9	2.4	2.7
Total (Table 3, Item 22)	31.7	34.2	38.7	34.1	37.1	38.0	29.7	32.3	34.6	41.3	36.6	21.8	34.4	36.5	37.4	36.6	26.0	26.1	21.7	26.8	30.0
Other Industries[a]																					
Copper	55.1	55.9	60.4	53.9	49.1	82.8	79.2	74.3	87.1	77.5	66.0	66.5	86.1	101.1	125.1	129.9	122.1	120.3	80.7	75.9r	84.5
Ingot	24.5	27.1	43.1	62.9	47.3	42.7	34.1	36.0	38.0	39.0	33.0	33.2	54.8	57.5	42.4	52.2	45.4	38.9	36.0	33.8	37.6
Total (Table 3, Item 25)	79.6	83.0	103.5	116.8	96.4	125.5	113.3	110.3	125.1	116.5	99.0	99.7	140.9	158.6	167.5	182.1	167.5	159.2	116.7	109.7r	122.1
All Industries																					
Copper	2,504.3	2,706.2	3,056.6	2,572.1	2,531.9	2,891.0	2,697.1	2,706.2	3,024.1	3,260.0	2,947.3	2,104.1	2,699.5	2,926.1	3,179.4	3,226.1	2,787.5	2,992.2	2,426.1	2,639.9r	2,992.0
Alloy	262.6	286.9	344.8	261.1	304.9	356.3	277.2	298.0	370.0	375.2	335.8	227.6	310.0	312.8	337.4	352.2	291.3	304.9	231.6	287.3r	329.4
Ingot (Table 3, Item 10)[b]	308.5	331.2	342.0	323.9	326.5	336.6	256.8	276.4	301.3	300.0	284.7	194.3	236.5	258.2	256.6	266.2	235.6	239.6	191.8	196.6r	220.5
NET METAL CONSUMED (Table 3, Item 12)	3,075.4	3,324.3	3,742.4	3,157.1	3,163.3	3,583.9	3,231.1	3,280.6	3,695.4	3,935.2	3,567.8	2,526.0	3,246.0	3,497.1	3,773.4	3,844.5	3,314.4	3,536.7	2,849.5	3,123.8r	3,541.9

Sources: U.S. Department of the Interior, Bureau of Mines; ABMS.
p - preliminary r - revised
(a) - Chemical, steel, aluminum and other industries.
(b) - Total consumption of ingot shown here is less than the consumption of metal by ingot makers shown in the details of Table 3, Item 3 and Table 3, Item 8. The difference, shown as Ingot Stocks & Other in Table 3, is primarily melting and other losses in the making of ingot.

Table 4

Supply of wire mill, brass mill, foundry and powder products and their consumption in the end-use markets

	METAL CONTENT, millions of pounds																				
	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984[p]
(1) Bare Wire	201	207	269	235	242	245	226	218	270	209	219	167	199	230	238	236	240	250	195	236r	219
(2) Communication Wire and Cable	519	539	565	543	534	716	735	803	766	873	799	584	687	836	885	971	850	851	751r	672r	625
(3) Building Wire							484	552	580	666	557	483	545	658	718	695	628	660	701r	744r	818
(4) Magnet Wire							466	427	496	537	446	338	451	516	525	531	443	492	397r	448r	520
(5) Power Cable							274	236	262	295	292	216	206	233	237	260	274	270	241r	214r	218
(6) Apparatus Wire and Cordage	1,271	1,431	1,660	1,578	1,437	1,563	135	137	169	185	179	140	163	209	209	210	214	197	169r	201r	213
(7) Automotive Wire and Cable (exc. Magnet)							36	46	67	74	64	54	72	90	94	84	58	61	59r	58r	64
(8) Other Insulated Wire and Cable							67	69	90	79	89	81	75	80	89	87	91	98	100r	79r	86
(9) Total Insulated Wire and Cable	1,790	1,970	2,225	2,121	1,971	2,279	2,197	2,270	2,430	2,709	2,426	1,896	2,199	2,622	2,757	2,838	2,558	2,629	2,418r	2,416r	2,544
(10) Total Wire Mill Products[a]	**1,991**	**2,177**	**2,494**	**2,356**	**2,213**	**2,524**	**2,423**	**2,488**	**2,700**	**2,918**	**2,645**	**2,063**	**2,398**	**2,852**	**2,995**	**3,074**	**2,798**	**2,879**	**2,613r**	**2,652r**	**2,763**
(11) Strip, Sheet and Plate	923	1,021	1,314	1,007	1,033	1,147	883	964	1,075	1,160	1,059	832	965	973	1,027	1,067	873	968	732	803	958
(12) Mechanical Wire	127	135	140	115	113	130	111	111	128	126	105	65	92	94	104	112	80	82	61	69	73
(13) Rod and Bar	753	828	901	666	787	886	693	744	910	1,005	899	587	826	900	943	960	805	808	614	762	868
(14) Plumbing Tube and Pipe	581	579	473	399	400	433	378	447	463	519	347	310	374	439	459	483	414	401	369	444	496
(15) Commercial Tube and Pipe	402	414	497	409	423	514	441	418	432	463	411	268	326	335	371	414	345	356	244	283	320
(16) Total Brass Mill Products (page 19)	**2,788**	**2,977**	**3,325**	**2,596**	**2,756**	**3,110**	**2,506**	**2,684**	**3,008**	**3,273**	**2,821**	**2,062**	**2,583**	**2,741**	**2,904**	**3,036**	**2,517**	**2,615**	**2,020**	**2,361**	**2,715**
(17) Sand Castings	799	793	769	671	658	711	620	597	654	667	566	447	491	524	521	542	434	415	361	373	413
(18) Permanent Mold Castings	42	45	58	54	55	56	49	46	39	33	30	19	15	19	22	38	23	18	17	18	26
(19) Die Castings	20	21	26	20	25	24	22	20	23	23	18	10	10	8	10	8	4	3	2	3	5
(20) Other Castings	30	30	57	54	53	62	60	42	47	57	57	44	33	29	27	29	28	40	25	28	27
(21) Total Foundry Products	**891**	**889**	**910**	**799**	**791**	**853**	**751**	**705**	**763**	**780**	**671**	**520**	**549**	**580**	**580**	**617**	**489**	**476**	**406**	**422**	**471**
(22) Total Powder Products	**57**	**62**	**67**	**56**	**62**	**61**	**47**	**52**	**54**	**64**	**69**	**46**	**65**	**64**	**56r**	**54r**	**38r**	**44r**	**34**	**39r**	**43**
(23) Domestic Products - Total	**5,725**	**6,105**	**6,796**	**5,807**	**5,822**	**6,548**	**5,727**	**5,929**	**6,525**	**7,035**	**6,206**	**4,691**	**5,595**	**6,237**	**6,535r**	**6,781r**	**5,842r**	**6,014r**	**5,072r**	**5,474r**	**5,992**
(24) Net Imports of Mill Products (page 20)	127	127	232	177	261	129	132	170	213	179	89	55	218	188	276	181	−20	209	180r	282r	475
(25) Mill Products to Domestic Market*	**5,852**	**6,232**	**7,028**	**5,984**	**6,083**	**6,677**	**5,859**	**6,099**	**6,738**	**7,214**	**6,295**	**4,746**	**5,813**	**6,425**	**6,811r**	**6,962r**	**5,822r**	**6,223r**	**5,252r**	**5,756r**	**6,467**
(26) Building Construction[b]	2,040	2,135	2,255	1,879	1,858	2,051	1,843	2,011	2,201	2,363	1,906	1,506	1,840	2,091	2,247	2,266	1,889	1,973	1,807	2,116	2,408
(27) Electrical and Electronic Products[b]	1,392	1,478	1,683	1,440	1,444	1,710	1,600	1,626	1,716	1,842	1,694	1,167	1,472	1,649	1,740	1,849	1,621	1,735	1,453	1,491	1,558
(28) Industrial Machinery and Equipment[b]	1,097	1,145	1,290	1,108	1,116	1,202	1,061	1,015	1,149	1,218	1,082	771	934	1,012	1,088	1,090	967	1,045	821	882	971
(29) Transportation Equipment[b]	661	735	813	668	716	745	612	712	792	904	761	604	840	916	888	863	596	654	506	606	745
(30) Consumer and General Products[b]	662	739	987	889	949	969	743	735	880	887	852	698	727	757	848	894	749	816	665	661	785

* Markets include – Building Construction: Plumbing & Heating; Building Wiring; Air Conditioning & Commercial Refrigeration; Builders' Hardware; Architectural.
Electrical & Electronic Products: Telecommunications; Power Utilities; Lighting & Wiring Devices; Electronics (except Consumer).
Industrial Machinery & Equipment: Heavy Industrial Equipment; Industrial Valves & Fittings; Heat Exchangers; Off-Highway Vehicles; Non-Electrical Instruments.
Transportation Equipment: Automobile, Truck & Bus; Railroad; Marine; Aircraft & Aerospace.
Consumer & General Products: Appliances; Fasteners & Closures; Military & Commercial Ordnance; Coinage; Utensils & Cutlery; Miscellaneous.

Sources: U.S. Department of Commerce, Bureau of the Census and Bureau of Industrial Economics; Metal Powder Producers Assn. (Line 22–1978 on); CDA.

p - preliminary r - revised

(a) - Copper content.

(b) - All data revised, 1964-1983, due to a re-evaluation of foundry end uses.

Table 4, Item 16.

Supply of brass mill products in the United States

METAL CONTENT, millions of pounds

	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984[p]
Strip, Sheet and Plate																					
Copper	243	272	354	240	190	238	185	236	239	269	261	212	227	233	234	259	201	227	176	203	254
Alloy	680	749	960	767	843	909	698	728	836	891	798	620	738	740	793	808	672	741	556	600	704
Total	923	1,021	1,314	1,007	1,033	1,147	883	964	1,075	1,160	1,059	832	965	973	1,027	1,067	873	968	732	803	958
Mechanical Wire																					
Copper	15	15	15	11	10	15	14	16	20	14	15	7	10	14	20	26	14	16	15	13	12
Alloy	112	120	125	104	103	115	97	95	108	112	90	58	82	80	84	86	66	66	46	56	61
Total	127	135	140	115	113	130	111	111	128	126	105	65	92	94	104	112	80	82	61	69	73
Rod and Bar																					
Copper	120	137	146	119	130	146	115	109	117	135	149	77	100	112	116	115	106	106	77	74	84
Alloy	633	691	755	547	657	740	578	635	793	870	750	510	726	788	827	845	699	702	537	688	784
Total	753	828	901	666	787	886	693	744	910	1,005	899	587	826	900	943	960	805	808	614	762	868
Plumbing Tube and Pipe																					
Copper	547	548	448	381	385	415	363	431	446	502	335	302	366	432	451	475	407	393	364	438	490
Alloy	34	31	25	18	15	18	15	16	17	17	12	8	8	7	8	8	7	8	5	6	6
Total	581	579	473	399	400	433	378	447	463	519	347	310	374	439	459	483	414	401	369	444	496
Commercial Tube and Pipe																					
Copper	287	290	362	260	276	363	304	288	305	322	265	171	216	234	275	316	262	269	182	216	256
Alloy	115	124	135	149	147	151	137	130	127	141	146	97	110	101	96	98	83	87	62	67	64
Total	402	414	497	409	423	514	441	418	432	463	411	268	326	335	371	414	345	356	244	283	320
All Mill Products																					
Copper	1,212	1,262	1,325	1,011	991	1,177	981	1,080	1,127	1,242	1,025	769	919	1,025	1,096	1,191	990	1,011	814	944	1,096
Alloy	1,574	1,715	2,000	1,585	1,765	1,933	1,525	1,604	1,881	2,031	1,796	1,293	1,664	1,716	1,808	1,845	1,527	1,604	1,206	1,417	1,619
TOTAL BRASS MILL PRODUCTS	2,786	2,977	3,325	2,596	2,756	3,110	2,506	2,684	3,008	3,273	2,821	2,062	2,583	2,741	2,904	3,036	2,517	2,615	2,020	2,361	2,715

Sources- U.S. Department of Commerce, Bureau of Industrial Economics; CDA.

p - preliminary

Supply of brass mill products in selected countries

METAL CONTENT, millions of pounds

	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984[p]
Benelux	NA	NA	NA	NA	NA	NA	NA	NA	NA	329	304	258	316	335	306	314	299	266	232	209r	221
Canada	211	200	253	228	261	269	231	221	236	281	264	192	223	232	272	264	191	229	155	183	206
France	495	493	492	479	497	597	585	580	598	667	603	476	569	586	590	638	657	615	600	567	623
Germany	897	922	831	780	968	1,103	1,067	986	1,130	1,311	1,157	932	1,219	1,207	1,219	1,337	1,403	1,277	1,256	1,379r	1,546
Italy	350	376	397	437	453	479	527	494	572	626	654	520	647	639	652	650	734	694	668	697r	784
Japan	864	687	730	929	1,030	1,160	1,201	1,152	1,330	1,682	1,298	1,148	1,546	1,573	1,722	1,874	1,912	1,832	1,741	1,909	2,203
Scandinavia	284	286	268	247	272	277	279	260	286	316	316	247	285	295	321	348	340	320	324	346	380
Spain	74	96	98	92	110	138	132	133	167	193	181	133	178	183	174	191	184	148	172	164r	166
Switzerland	107	107	109	99	99	110	116	104	100	114	118	81	96	116	105	111	120	106	98	106	121
United Kingdom	1,156	1,149	1,041	924	1,019	1,035	956	842	905	1,004	903	737	803	827	845	797	644	563	597	565	620
United States	2,786	2,969	3,325	2,596	2,756	3,110	2,506	2,684	3,008	3,273	2,821	2,062	2,583	2,741	2,904	3,036	2,517	2,615	2,020	2,361	2,715

Sources: World Bureau of Metal Statistics; U.S. Department of Commerce, Bureau of Industrial Economics; CDA.

p - preliminary r - revised

NA - not available

Table 4, Item 24.

Imports and exports of wire mill, brass mill and powder products

	METAL CONTENT, millions of pounds																				
	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984[p]
Imports of:																					
Wire Rod	10.5	10.4	7.8	6.1	13.0	2.4	2.4	3.0	3.0	5.3	2.8	1.5	2.5	13.8	7.0	6.2	5.4	6.0	7.4	8.6	18.1
Bare Wire (incl. Stranded)	19.0	28.0	31.0	24.0	28.0	22.0	35.0	27.0	19.3	26.9	42.9	22.0	39.0	27.5	32.8	30.8	18.9	22.3	26.6	35.0	38.7
Insulated Wire and Cable									11.5	14.0	12.3	9.2	11.0	11.1	18.2	23.4	21.8	19.2	19.9	29.3	44.7
Total Wire Mill Products	**29.5**	**38.4**	**38.8**	**30.1**	**41.0**	**24.4**	**37.4**	**30.0**	**33.8**	**46.2**	**58.0**	**32.7**	**52.5**	**52.4**	**58.0**	**60.4**	**46.1**	**47.5**	**53.9**	**72.9**	**101.5**
Copper - Strip, Sheet and Plate	37.1	44.6	35.0	41.9	77.5	30.9	26.9	38.7	45.7	48.7	46.9	37.8	59.9	64.7	85.8	80.1	54.1	71.8	59.1	67.6	103.8
Rod and Bar	3.6	2.6	5.2	2.8	8.7	1.4	3.5	4.1	6.1	6.0	6.7	4.2	6.6	8.0	17.5	17.0	12.0	12.4	9.3	9.2	13.1
Tube and Pipe	13.7	19.6	51.1	31.5	48.7	31.4	36.4	43.1	51.6	55.0	31.3	24.3	33.7	39.9	46.3	44.8	22.9	33.8	35.7	55.1	65.8
Alloy - Strip, Sheet and Plate	29.6	30.0	63.8	59.8	64.6	45.5	47.8	74.4	92.4	84.9	57.2	51.4	104.6	105.7	153.7	121.5	81.3	140.7	124.3	158.5	232.0
Mechanical Wire	3.8	1.9	2.3	1.9	2.4	2.0	3.2	4.0	4.3	5.7	4.1	2.6	6.3	7.9	9.9	9.7	7.9	10.4	10.3	11.7	14.8
Rod and Bar	17.0	10.8	44.0	28.0	15.3	12.0	6.9	7.3	12.5	17.9	16.2	11.7	41.7	33.4	51.9	48.3	26.3	121.9	51.4	47.8	83.0
Tube and Pipe	40.4	41.1	46.7	36.3	50.4	44.9	40.3	47.6	53.1	48.2	40.4	32.4	47.3	47.2	69.5	54.4	43.6	51.5	45.5	54.7	71.8
Total Brass Mill Products	**145.2**	**150.6**	**248.1**	**202.2**	**267.6**	**168.1**	**165.0**	**219.2**	**265.7**	**266.4**	**202.8**	**164.4**	**300.1**	**306.8**	**434.6**	**375.8**	**248.1**	**442.5**	**335.6**	**404.6**	**584.3**
Total Powder Products	**2.5**	**2.6**	**2.9**	**3.0**	**3.5**	**2.8**	**2.3**	**2.4**	**2.7**	**2.3**	**1.7**	**1.6**	**2.6**	**2.4**	**2.5**	**2.3**	**2.0**	**2.7**	**2.3**	**3.1**	**3.3**
TOTAL IMPORTS	**177.2**	**191.6**	**289.8**	**235.3**	**312.1**	**195.3**	**204.7**	**251.6**	**302.2**	**314.9**	**262.5**	**198.7**	**355.2**	**351.6**	**495.1**	**438.5**	**296.2**	**492.7**	**391.8**	**480.6**	**689.1**
Exports of:																					
Wire Rod	8.9	8.9	10.1	10.4	5.4	7.2	8.3	14.6	10.9	10.4	14.0	10.9	8.5	11.2	13.0	30.9	53.5	30.7	18.2	12.5	23.6
Bare Wire (incl. Stranded)[(a)]	10.4	7.0	6.3	8.8	4.1	8.1	4.2	2.9	5.5	10.4	11.3	7.4	9.6	11.7	18.7	18.8	13.9	15.5	16.7	18.3	19.4
Insulated Wire and Cable	18.1	23.7	22.9	20.3	23.5	26.1	30.3	29.8	35.5	41.1	55.2	69.6	66.8	98.5	121.8	103.0	86.3	112.4	99.3r	98.4r	104.6
Total Wire Mill Products	**37.4**	**39.6**	**39.3**	**39.5**	**33.0**	**41.4**	**42.8**	**47.3**	**51.9**	**61.9**	**80.5**	**87.9**	**84.9**	**121.4**	**153.5**	**152.7**	**153.7**	**158.6**	**134.2r**	**129.2r**	**147.6**
Copper - Strip, Sheet and Plate	0.8	2.3	1.6	1.8	1.7	3.2	3.3	1.5	0.9	1.8	2.2	0.8	1.4	4.2	2.9	3.3	6.7	7.3	4.3	3.1	4.7
Rod and Bar	–	2.7	2.1	0.7	2.2	2.0	3.7	0.9	1.7	4.4	2.7	8.1	1.4	2.6	6.0	12.0	37.0	10.0	13.8	4.0	3.1
Tube and Pipe	2.9	1.8	1.0	1.4	1.2	1.9	2.1	2.5	2.3	15.5	13.5	4.4	5.1	6.2	5.8	18.8	38.9	24.1	10.1	8.0	9.5
Alloy - Strip, Sheet and Plate	2.2	6.9	2.4	2.2	2.5	4.7	4.6	4.2	7.9	12.2	14.5	6.4	8.3	8.6	9.0	10.4	17.3	28.4	10.2	11.6	11.7
Mechanical Wire	0.7	1.6	2.2	1.8	2.2	2.4	4.0	3.5	2.5	3.6	8.4	5.0	4.8	4.2	6.9	8.2	8.0	7.9	12.5	11.6	9.1
Rod and Bar	2.1	4.1	3.5	4.4	3.3	4.2	6.1	12.9	14.3	17.4	30.4	15.5	15.2	15.8	19.3	15.2	20.1	18.6	11.0	15.6	16.3
Tube and Pipe	2.7	3.8	3.9	4.2	3.0	3.5	3.3	5.1	4.1	13.7	16.0	13.2	12.4	7.0	12.0	32.9	31.0	26.6	14.1	13.9	10.0
Total Brass Mill Products	**11.4**	**23.2**	**16.7**	**16.5**	**16.1**	**21.9**	**27.1**	**30.6**	**33.7**	**68.6**	**87.7**	**53.4**	**48.6**	**48.6**	**61.9**	**100.8**	**159.0**	**122.9**	**76.0**	**67.8**	**64.4**
Total Powder Products	**1.0**	**1.9**	**2.2**	**2.0**	**2.3**	**3.5**	**3.0**	**3.9**	**3.7**	**5.0**	**5.4**	**2.5**	**3.7**	**3.5**	**3.8**	**3.9**	**3.9**	**2.5**	**2.1**	**1.7**	**1.9**
TOTAL EXPORTS	**49.8**	**64.7**	**58.2**	**58.0**	**51.4**	**66.8**	**72.9**	**81.8**	**89.3**	**135.5**	**173.6**	**143.8**	**137.2**	**173.5**	**219.2**	**257.4**	**316.6**	**284.0**	**212.3r**	**198.7r**	**213.9**
NET IMPORTS (Table 4, Item 24)	**127.4**	**126.9**	**231.6**	**177.3**	**260.7**	**128.5**	**131.8**	**169.8**	**212.9**	**179.4**	**88.9**	**54.9**	**218.0**	**188.1**	**275.9**	**181.1**	**–20.4**	**208.7**	**179.5r**	**281.9r**	**475.2**

Sources: U.S. Department of Commerce, Bureau of the Census; Copper & Brass Fabricators Council, Inc; CDA.

p - preliminary r - revised

(a) - Stranded not included prior to 1972.

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